

Name: _____ Section: _____

Instructions: Show all your work in order to receive proper credit. No formula sheets and no notes are allowed during the quiz. No cell phones, calculators, or any other electronic devices are allowed in a student's possession during any quiz. All such devices must be put away in the student's bag, out of reach of the student during the quiz. Quiz should be completed in one seating with no breaks. Box your final answer. Good luck! **Timing:** 15 minutes

1. (3 pts) Use implicit differentiation to find y' .

$$y \cdot \sqrt{x+1} = 4$$

2. (3 pts) Find the slope of the tangent line to the graph of $5x^2y - \pi \cdot \cos(y) = 6\pi$ at $P(1, \pi)$.

3. (4 pts) Find the absolute minimum value and absolute maximum value of $g(x) = \frac{5x}{x^2 + 1}$ on $[-2, 1]$.